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Tests 2162 & 2163: Case IH JX 1070C Diesel

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SUMMARY OF OECD TESTS 2162 and 2163—NEBRASKA SUMMARY 451

CASE IH JX 1070C DIESEL

16 SPEED

POWER TAKE-OFF PERFORMANCE

Power HP (kW)	Crank shaft speed rpm	Gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Mean Atmospheric Conditions
MAXIMUM POWER AND FUEL CONSUMPTION					
Rated Engine Speed (PTO speed—565 rpm)					
59.8 (44.6)	2299	3.87 (14.65)	0.452 (0.275)	15.45 (3.04)	
Maximum Power (2 hours)					
60.6 (45.2)	2248	3.88 (14.70)	0.447 (0.272)	15.63 (3.08)	
Standard Power Take-off speed (543 rpm)					
60.2 (44.9)	2211	3.77 (14.27)	0.437 (0.266)	15.99 (3.15)	

VARYING POWER AND FUEL CONSUMPTION

59.8 (44.6)	2299	3.87 (14.65)	0.452 (0.275)	15.45 (3.04)	Air temperature
52.4 (39.1)	2370	3.55 (13.43)	0.473 (0.288)	14.77 (2.91)	64°F (18°C)
39.7 (29.6)	2393	2.89 (10.95)	0.510 (0.310)	13.70 (2.70)	Relative humidity
27.0 (20.1)	2427	2.26 (8.54)	0.585 (0.356)	11.94 (2.35)	51%
13.5 (10.1)	2461	1.63 (6.18)	0.847 (0.515)	8.26 (1.63)	Barometer
-- --	2478	1.03 (3.91)	-- --	-- --	30.1" Hg (101.8 kPa)

Maximum Torque -156.9 lb.-ft. (257.9 Nm) at 1423 rpm
Maximum Torque Rise -39.1%
Torque rise at 1800 engine rpm -23%

Location of tests: Alma Mater Studiorum, University
Di Bologna, Via Gandolfi, 19-40057, Cadriano,
Bologna, Italy

Dates of tests: February-May, 2004

Manufacturer: CNH America LLC, 700 State St.
Racine, WI. 53404 USA

FUEL and OIL: Fuel No. 2 Diesel **Specific gravity converted to 60°/60°F (15°/15°C)** 0.840
Fuel weight 6.99 lbs/gal (0.838 kg/l) **Oil** SAE 15W40
API service classification CF-4/SG **Oil consumption for 10 hours** 0.03 lb (13 gm)
Transmission and hydraulic lubricant Akcela
Nexplorer 130 **Front axle lubricant** Akcela
Nexplorer 130

ENGINE: Make Iveco Diesel **Type** three cylinder
vertical with turbocharger **Serial No.** 864359
Crankshaft lengthwise **Rated engine speed** 2300
Bore and stroke 4.094" x 4.528" (104.0 mm x 115.0
mm) **Compression ratio** 18.0 to 1 **Displacement**
179 cu in (2930 ml) **Starting system** 12 volt
Lubrication pressure **Air cleaner** two paper
elements **Oil filter** one full flow cartridge **Oil cooler**
engine coolant heat exchanger for crankcase oil,
radiator for hydraulic and transmission oil **Fuel**
filter one paper element **Muffler** underhood
Exhaust vertical **Cooling medium temperature**
control thermostat and variable speed fan

CHASSIS: **Type** 2WD and front wheel assist **Serial**
No. HJH297816 **Tread width** rear 48.5" (1232 mm)
to 76.7" (1949 mm) front: 2WD - 56.7" (1439 mm)
to 63.3" (1607 mm), FWA - 48.7" (1236 mm) to 76.6"
(1945 mm) **Wheel base** 2WD - 83.8" (2130 mm) FWA
- 81.3" (2065 mm) **Hydraulic control system** direct
engine drive **Transmission** selective gear fixed ratio
Nominal travel speeds (30 km/h transmission) mph
(km/h) first 0.39 (0.63) second 0.58 (0.93) third 0.85
(1.37) fourth 1.26 (2.03) fifth 1.63 (2.63) sixth 2.00
(3.22) seventh 2.43 (3.91) eighth 2.98 (4.79) ninth
3.57 (5.75) tenth 4.37 (7.04) eleventh 5.30 (8.53)
twelfth 5.77 (9.28) thirteenth 6.49 (10.44) fourteenth
8.60 (13.84) fifteenth 12.64 (20.34) sixteenth 18.72
(30.13) reverse 0.38 (0.61), 0.56 (0.90), 0.83 (1.33),
1.22 (1.97), 1.58 (2.54), 1.93 (3.11), 2.36 (3.79), 2.88
(4.64), 3.46 (5.57), 4.24 (6.82), 5.13 (8.26), 5.59
(8.99), 6.28 (10.11), 8.33 (13.40), 12.24 (19.70),
18.14 (29.19) **Clutch** dual dry disc operated by foot
pedal **Brakes** wet disc hydraulically operated by two
foot pedals which can be locked together **Steering**
hydrostatic **Power take-off** 540 rpm at 2196 engine
rpm or 1000 rpm at 2260 engine rpm **Unladen**
tractor mass 2WD - 5920 lb (2685 kg), FWA - 6450
lb (2925 kg)

DRAWBAR PERFORMANCE(40 km/h trans.)**BALLASTED - FRONT DRIVE ENGAGED
FUEL CONSUMPTION CHARACTERISTICS**

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
75% of Pull at Maximum Power—Five Hours 10th (3M Hi) Gear									
40.0 (29.8)	2720 (12.10)	5.52 (8.88)	2387	4.3	0.539 (0.328)	12.98 (2.56)	194 (90)	66 (19)	30.0 (101.7)
MAXIMUM POWER IN SELECTED GEARS									
6th (1M Hi) Gear									
40.0 (29.8)	6665 (29.65)	2.25 (3.62)	2383	15.0	0.530 (0.322)	13.20 (2.60)	194 (90)	70 (21)	29.9 (101.3)
7th (2M Lo) Gear									
46.8 (34.9)	6590 (29.32)	2.66 (4.28)	2304	14.7	0.547 (0.333)	12.79 (2.52)	190 (88)	68 (20)	29.9 (101.3)
8th (2M Hi) Gear									
50.4 (37.6)	5590 (24.87)	3.38 (5.44)	2275	10.3	0.515 (0.313)	13.57 (2.67)	192 (89)	68 (20)	29.9 (101.3)
9th (3 M Lo) Gear									
50.8 (37.9)	4520 (20.11)	4.21 (6.78)	2270	6.5	0.514 (0.313)	13.60 (2.68)	192 (89)	66 (19)	29.9 (101.3)
10th (3M Hi) Gear									
51.0 (38.0)	3620 (16.10)	5.28 (8.50)	2280	5.2	0.512 (0.312)	13.65 (2.69)	194 (90)	68 (20)	29.9 (101.3)
11th (4M Lo) Gear									
50.3 (37.5)	2920 (12.98)	6.46 (10.40)	2284	4.6	0.522 (0.318)	13.39 (2.64)	190 (88)	68 (20)	29.9 (101.3)
12th (1 Hi) Gear									
50.9 (38.0)	2720 (12.10)	7.02 (11.30)	2284	4.1	0.518 (0.315)	13.50 (2.66)	192 (89)	70 (21)	29.9 (101.3)
13th (4 M Hi) Gear									
48.9 (36.5)	2295 (10.21)	8.00 (12.87)	2300	3.7	0.536 (0.326)	13.05 (2.57)	190 (88)	68 (20)	29.9 (101.3)
14th (2 Hi) Gear									
47.9 (35.7)	1725 (7.67)	10.42 (16.77)	2243	2.9	0.551 (0.335)	12.69 (2.50)	189 (87)	68 (20)	29.9 (101.3)

REPAIRS AND ADJUSTMENTS: No repairs or adjustments

REMARKS: All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet the manufacturer's claim of 5258 lbs (2385 kg) 3 point lift capacity. The performance results on this summary were taken from OECD tests conducted under the Code I Test procedure.

We, the undersigned, certify that this is a true summary of data from OECD Reports No. **2162** and **2163**, Nebraska Summary 451, August 29, 2005.

Leonard L. Bashford
Director

M.F. Kocher
V.I. Adamchuk
W.P. Campbell
Board of Tractor Test Engineers

JX 1070C-FWA(40 km/h transmission)

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	-No., size, ply & psi (kPa)	Two 16.9R30; **,19 (130)	Two 16.9R30; **,19 (130)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	440 lb (200 kg)	None
Front Tires	-No., size, ply & psi (kPa)	Two 11.2R24; **,17 (120)	Two 11.2R24; **,17 (120)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	640 lb (290 kg)	None
Height of Drawbar		19.7 in (500 mm)	19.7 in (500 mm)
Static Weight with Operator	- Rear	4565 lb (2070 kg)	4300 lb (1950 kg)
	- Front	3130 lb (1420 kg)	2315 lb (1050 kg)
	- Total	7695 lb (3490 kg)	6615 lb (3000 kg)

DRAWBAR PERFORMANCE(30 km/h trans.)

BALLASTED - 2WD

FUEL CONSUMPTION CHARACTERISTICS

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank- shaft speed rpm	Slip %	Fuel Consumption lb/hp.hr (kg/kW.h)	Fuel Consumption Hp.hr/gal (kW.h/l)	Temp.°F (°C) cool- ing med	Air dry bulb	Barom. inch Hg (kPa)
75% of Pull at Maximum Power—Five Hours 10th (3 MHi) Gear									
38.6 (28.8)	3410 (15.16)	4.25 (6.85)	2380	7.2	0.542 (0.330)	12.89 (2.54)	183 (84)	64 (18)	30.1 (102.0)

MAXIMUM POWER IN SELECTED GEARS

9th (3M Lo) Gear									
43.6 (32.5)	5150 (22.91)	3.17 (5.11)	2372	15.1	0.528 (0.321)	13.25 (2.61)	183 (84)	57 (14)	29.9 (101.2)
10th (3M Hi) Gear									
45.7 (34.1)	4535 (20.17)	3.78 (6.09)	2232	12.1	0.540 (0.329)	12.94 (2.55)	185 (85)	59 (15)	29.9 (101.2)
11th (4 M Lo) Gear									
48.5 (36.2)	3760 (16.72)	4.84 (7.79)	2263	8.4	0.539 (0.328)	12.98 (2.56)	187 (86)	57 (14)	29.9 (101.2)
12th (1 Hi) Gear									
49.8 (37.2)	3525 (15.68)	5.30 (8.53)	2263	7.8	0.526 (0.320)	13.30 (2.62)	185 (85)	59 (15)	29.9 (101.2)
13th (4 M Hi) Gear									
49.4 (36.8)	3015 (13.42)	6.14 (9.88)	2284	6.1	0.530 (0.322)	13.20 (2.60)	183 (84)	59 (15)	29.9 (101.2)
14th (2 Hi) Gear									
47.1 (35.1)	2175 (9.67)	8.13 (13.08)	2241	4.1	0.555 (0.337)	12.61 (2.48)	185 (85)	61 (16)	29.9 (101.2)

JX 1070C-2WD (30 km/h transmission)

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	-No., size, ply & psi (kPa)	Two 16.9R30; **; 17 (120)	Two 16.9R30; **; 17 (120)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	440 lb (200 kg)	None
Front Tires	-No., size, ply & psi (kPa)	Two 7.50-16; 8; 44 (300)	Two 7.50-16; 8; 44 (300)
Ballast	-Liquid (total)	None	None
	-Cast Iron (total)	640 lb (290 kg)	None
Height of Drawbar		26.4 in (670 mm)	26.4 in (670 mm)
Static Weight with Operator	-Rear	4345 lb (1970 kg)	4055 lb (1840 kg)
	-Front	2820 lb (1280 kg)	2030 lb (920 kg)
	-Total	7165 lb (3250 kg)	6085 lb (2760 kg)

TRACTOR SOUND LEVEL WITH CAB	FWA dB(A)	2WD dB(A)
At no load in 9th (3M Lo) gear	79.4	79.1
Bystander in 16th (4 Hi) gear	82.8	81.9

CENTER OF GRAVITY - 2WD

Horizontal distance forward from centerline of rear wheels	27.8" (705 mm)
Vertical distance above roadway	31.7" (804 mm)
Horizontal distance from center of rear wheel tread	0.3" (6 mm) to the left

CENTER OF GRAVITY - FWA

Horizontal distance forward from centerline of rear wheels	28.5" (723 mm)
Vertical distance above roadway	31.9" (809 mm)
Horizontal distance from center of rear wheel tread	0.2" (5 mm) to the left

TURNING ON A CONCRETE SURFACE (2WD)

Turning radius—without brake right 141" (3.58 m) left 139" (3.53 m)
Turning space radius—without brake right 145" (3.68 m) left 143" (3.63 m)

TURNING ON A CONCRETE SURFACE (FWA)

Turning radius—without brake right 140" (3.56 m) left 140" (3.56 m)
Turning space radius—without brake right 146" (3.70 m) left 146" (3.70 m)

THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II

Quick Attach: None

Maximum force exerted through whole range: 3945 lbs (17.5 kN)

i) Opening pressure of relief valve: NA

Sustained pressure with relief valve open: 3010 psi (208 bar)

ii) Pump delivery rate at minimum pressure: 13.8 GPM (52.3 l/min) High flow option 3000 psi (207 bar) 16.9 GPM (63.9 l/min)

iii) Pump delivery rate at maximum

hydraulic power: 9.6 GPM (36.2 l/min) 14.9 GPM (56.4 l/min)

Delivery pressure: 2830 psi (195 bar) 2340 psi (161 bar)

Power: 15.8 HP (11.8 kW) 20.3 HP (15.2 kW)

THREE POINT HITCH PERFORMANCE (SAE Static Test)

Observed maximum pressure psi. (bar) 3010 (208)

Location: hydraulic pump

Hydraulic oil temperature: °F (°C) 114 (45)

Location: hydraulic sump

Category: II

Quick attach: none

System pressure 2730 psi (188 Bar)

Hitch point distance to ground level in. (mm)	14.6 (370)	19.3 (490)	24.2 (615)	28.9 (735)	33.9 (860)	38.6 (980)
Lift force on frame lb	4835	5290	5260	4995	4655	4280
" " " " " " (kN)	(21.5)	(23.5)	(23.4)	(22.2)	(20.7)	(19.0)

HITCH DIMENSIONS AS TESTED—NO LOAD

	SAE TEST		OECD TEST	
	inch	mm	inch	mm
A	27.2	690	27.4	695
B	10.0	255	10.0	255
C	12.3	312	12.3	312
D	10.9	276	10.9	276
E	14.2	361	12.1	308
F	7.5	189	7.5	189
G	27.2	690	27.4	695
H	1.2	30	1.2	30
I	13.4	340	13.6	345
J	19.7	501	19.9	506
K	20.6	523	20.6	523
L	40.7	1035	40.7	1035
M	21.7	550	21.7	550
N	34.6	880	34.6	880
O	14.6	370	14.7	373
P	38.7	984	43.9	1116
Q	39.7	1009	39.7	1009
R	22.4	570	22.6	573

